
Clarifications for Preliminary Phase II Alternatives

INTRODUCTION

The three Preliminary Phase II Alternatives are formed around different configurations of Delta conveyance. As described in the attached material, each alternative includes the same set of four common programs related to **water use efficiency, water quality, system integrity, and ecosystem quality**. Each alternative could include some combination of storage to support the common programs and the Delta conveyance.

The attached material on Preliminary Phase II Alternatives was included in the Workshop 7 Information Packet and discussed at the workshop on June 25, 1996. Based on comments and input received at Workshop 7, clarifications of several key issues are necessary to more fully explain and supplement that information. The following brief paragraphs attempt to clarify several key issues that were confusing and unclear to workshop participants:

1. **Some small changes/variations to the common programs may be needed for the different alternatives.** While the approaches for each common program are not intended to vary significantly between the alternatives, some small changes/variations may be necessary so the goals of the common programs better correlate with the Delta conveyance and water storage for a given alternative. For instance, if an alternative continued to rely on exports from the existing south Delta pumping plants, then the best location for shallow water habitat may not be in the south Delta where fish would be vulnerable to entrainment, but would be located in another area. Since the alternatives have different Delta conveyance and storage components, the level of benefits will vary between alternatives.
2. **The common programs now include the "core actions."** During previous drafts of the alternatives, each alternative included the same set of "core actions." These were actions that generally had broad stakeholder support and were considered important to an overall Bay-Delta solution regardless of the final selected solution. The core actions have now been included in the four common programs, as appropriate. For instance, core actions relating to water quality are now included in the water quality program. The core actions will be among the first actions implemented within each program.
3. **A revised phasing plan will be prepared for each alternative.** Each alternative can be implemented in phases over time. This phasing offers the flexibility to apply adaptive management for fine-tuning the overall Program solution in the future as more information becomes available. Phasing also offers the opportunity to make the alternatives more affordable by financing costs over a

period of time extending 20 to 40 years or more. Example phasing ("sequencing") plans have been prepared for each alternative. Future revisions to these plans will acknowledge opportunities for adaptive management. They will also account for the longer planning, permitting, and construction lead times typical for some portions of the alternatives. For instance, revised plans should show planning for reservoirs starting in the first phase of implementation while permitting and construction may not be possible until latter phases.

4. **Priorities for water storage will be developed.** Several comments received during Workshop 6 (held in April) suggested prioritizing types of water storage whereby opportunities for conjunctive use and groundwater banking are exhausted prior to considering any surface storage. While no detailed analysis has yet been conducted, the Program staff has assumed a general order of implementation starting with conjunctive use and continuing with groundwater banking, offstream surface storage, and on-stream surface storage as needed to meet storage requirements of a given alternative. This order is based on our perception of the ease of permitting and the time required to bring a facility on line. We will consider expanding existing facilities and providing new facilities for each of these types of storage. We believe that the Program's commitment to multiple objectives, which include ecosystem health, requires that instream surface storage be given a lower priority than the other three options for the storage component. Refinements in this assumed order of implementation will be made as the storage evaluations in Phase II of the Program progresses.
5. **Temporary and permanent land conversion are not methods for improving water use efficiency.** During earlier drafts, some of the alternatives included provision for very high levels of land conversion. In the three alternatives presented at Workshop 7, the potential for land conversion was left to the local water agencies as one potential method to promote water quality and water use efficiency. During Workshop 7, participants pointed out that land conversion may be a method to manage overall water supplies but it should not be considered a method to use water more efficiently. We agree that land conversion should not be considered a water use efficiency method but believe it could be used along with other water management methods to improve water quality and reliability of water supplies. Currently, a BDAC work group is considering policy issues related to water use efficiency. This group will also consider how land conversion can best be utilized to meet the water reliability objectives of the Program. Land conversion to promote water quality remains an important element of the water quality component of the common program.
6. **Real-time monitoring has the potential for significantly improving water diversion timing but the technique is still experimental.** Real-time monitoring is the continuous observation in multiple locations of biological conditions on site in order to adjust water management operations to protect fish species and allow optimal operation of the water supply system. If an effective monitoring system

can be developed it will benefit both the ecosystem health and the water supply. Several years of field studies have been completed using real-time monitoring which demonstrated its potential as a management tool. However, real-time monitoring for fisheries management requires ~~continued further refinement and evaluation of effectiveness through a variety of hydrologic cycles before to determine to what extent it can be relied on exclusively as a water and fisheries management tool.~~

~~7. System improvements will create new water supply opportunities for all beneficial uses including ecosystem needs and consumptive uses.~~

~~Improvements to Delta conveyance will improve system operational flexibility by allowing diversion timing changes for the benefit of all beneficial uses. The flexibility added by opportunities to shift timing can be used to increase environmental flows at specific times. The improved conveyance flexibility can also increase supply opportunities, transfers, and wet year diversions. New storage can bank water during periods which have the lowest priority for ecosystem health for a wide range of environmental, agricultural, and urban beneficial uses. Water stored in these periods can be released during periods of high priority for ecosystem health to improve instream flows and Delta outflows and can be used to create opportunities for consumptive use. The combination of improved Delta conveyance and new storage further improves operational flexibility and creates new water supply opportunities for all uses.~~

7. **Improved fish screening is included in the common ecosystem restoration program included with each alternative.** A priority of fish screening needs for existing Bay-Delta system diversions will be developed and included in the common Ecosystem Restoration Program for each alternative. This will include screening needs within the Delta and on the upstream Sacramento and San Joaquin rivers and tributaries. In addition, new screens will be considered for the new through Delta diversion from the Sacramento River in Alternative 2. New screens will be considered for both the isolated and the through Delta diversions from the Sacramento River in Alternative 3. For all three alternatives, fish screen improvements are included at existing Project Pumps.

8. **Relationships with other ongoing programs and projects in the Bay-Delta system will be defined.** Several ongoing programs and projects may have some features overlapping with the Phase II alternatives for CALFED. During Phase II, the Program team will evaluate these overlaps and policy issues related to these Programs will be addressed so as to produce a best fit with the Bay-Delta Program.

9. **Alternative 3 will include analysis of a full range of sizes for the isolated facility.** Alternative 3 is formed around a combination of improved through Delta conveyance and new isolated conveyance. The sizing analysis will consider a wide range of capacities for the isolated and through Delta portions

and will determine an optimal range of capacities and combinations of these capacities for this alternative. In addition, a fully isolated conveyance, with sufficient capacity to meet the full physical capacity of the State and Federal Projects, will be evaluated without those projects diverting from the south Delta. These will all be evaluated in conjunction with a range of storages and the common programs to develop a complete assessment.

The through Delta conveyance of the dual facilities can be sized and operated to convey from 0 (no State/Federal pumping from the south Delta) to 15,000 cfs to the south Delta export facilities. The isolated conveyance can be sized and operated to convey from 5,000 to 15,000 cfs to the south Delta export facilities. The combined diversion capacity of the State and Federal Projects is limited to approximately 15,000 cfs, the physical capacity of the downstream conveyance system. While the combined capacities of the through Delta channels and the isolated conveyance could be larger, this diversion capacity will not be increased to exceed the downstream conveyance capacity.

The largest isolated conveyance to be evaluated will deliver no more than 15,000 cfs to the south Delta export facilities. A variety of through Delta conveyance capacity sizes will be evaluated with this facility to increase the operational flexibility. Depending on the needs at specific times and the operational parameters for fishery protection, only the isolated conveyance may operate, only the through Delta conveyance may operate, or some combination of the two may operate. In addition to this Dual Delta conveyance operation, a fully isolated conveyance will be evaluated. In this case, all exports would pass through the isolated facility with no through Delta conveyance to the export facilities.